



**BRITISH
ACADEMY**
THE UK'S NATIONAL ACADEMY FOR
THE HUMANITIES AND SOCIAL SCIENCES

Brunel
UNIVERSITY
L O N D O N

2011 London Workshop on Problem Gambling: Theory and (Best) Practice

Brunel University, London, UK, September 13th, 2011
Organisers: Fernand Gobet & Marvin Schiller

Proceedings of Abstracts

Contents

Programme	2
Abstracts	3
Invited Talks	3
Talks	6

Programme

- 9.00–9.30 am Time for arrival, coffee, badges.
- 9.25–9.30 am Welcome
- 9.30–10.30 am *Invited talk*
Henrietta Bowden-Jones & : Cognitive distortions in pathological gamblers: A research overview
- 10.30–11.00 am Coffee break
- 11.00–12.10 am *Session 1: Player Behaviour & Cognition (Session Chair: Adrian Scarfe)*
Luke Clark, Rosanna Michalczuk & Henrietta Bowden-Jones: Impulsivity and cognitive distortions in pathological gamblers attending the UK National Problem Gambling Clinic
Guillermo Campitelli & Craig Speelman: The role of overconfidence on problem gambling
Jim Fearnley, Michelle Gray, Margaret Blake, Heather Wardle & Meera Balarajan: An exploration of machine features and player behaviour during individual gaming sessions (30 minutes)
- 12.10–1.30 pm Lunch break
- 1.30–2.30 pm *Invited talk*
Mark Griffiths: Technological trends in gambling: Is behavioural tracking the way forward?
- 2.30–3.30 pm *Session 2: Tools & Technology (Session Chair: t.b.a.)*
Juemin Xu: Hot hand fallacy or gambler’s fallacy, or both
Anssi Airas: Tool for responsible games
Marvin Schiller & Fernand Gobet: Cognitive models for problem gambling
- 3.30–4.00 pm Coffee break
- 4.00–5.20 pm *Session 3: Prevalence, Prevention and Treatment (Session Chair: Mark Griffiths)*
Daniel Rhind: Do you want to bet? The prevalence of problem gambling amongst athletes in the United Kingdom
Adrian Scarfe: Promoting successful treatment for problem gamblers
David Burns: Reduction of social isolation in people “at risk” of problem gambling within the rural Australian central Victorian community of Maryborough, with a particular focus on women 55 years and over using an Integrated Health Promotion model
Anthony Franklin: Responsible gambling – A perspective from a pathological gambler
- 5.20–5.30 pm Closing session

Invited Talks – Abstracts

Cognitive Distortions in Pathological Gamblers: A Research Overview

Dr. Henrietta Bowden-Jones

Imperial College & National Problem Gambling Clinic, London, UK

The talk will focus on commonly observed cognitive distortions in pathological gamblers and give an overview of the different types outlined by international researchers in the field. I will then focus on impulsivity and cognitive distortions in the processing of chance, probability and in skill by outlining our recently published research (Psychological Medicine 2011 00, 1-11) conducted at the National Problem Gambling Clinic, the first National Health Service in the country to treat pathological gamblers.

Dr. Henrietta Bowden-Jones
MRCPsych, BA (Hons), DOccMed, MD (Imperial)

Dr Henrietta Bowden-Jones is a consultant psychiatrist working in the field of substance misuse and addiction. She is an Honorary Senior Lecturer in the Division of Neurosciences at Imperial College and is the current co-recipient of a MRC (Medical Research Council) grant in the area of decision-making and impulsivity.

Within the NHS she is the Director of the National Problem Gambling Clinic (Central North West London NHS Foundation Trust) as well as running an inpatient ward for alcohol and drug detoxifications in central London.

In 2008 she founded the National Problem Gambling Clinic, based in London, the first NHS multidisciplinary treatment centre for problem gamblers which has been inundated by hundreds of referrals since its opening. Henrietta also runs the UK Problem Gambling Research Consortium, a group of 12 researchers from Imperial, Cambridge, Oxford and UCL collaborating on different research projects within the National Problem Gambling Clinic.

She is the Royal College of Psychiatrists' spokesperson on Problem Gambling as well as being a current elected member of the Executive Committee Addictions Faculty at the Royal College of Psychiatrists.

She held the post of elected Finance Officer for the Addictions Faculty at the Royal College of Psychiatrists for the period 2006-2010. Henrietta is a member of the Government's Responsible Gambling Strategy Board since 2009 advising on prevention, research, treatment and education and a member of the Board's Prevention Panel.

Having completed her medical degree and her psychiatric training she spent some years with Imperial College researching the effects of alcohol on the brain.

She was awarded an MD for her work, her doctorate thesis is on Ventromedial Prefrontal Cortex Dysfunction in Alcohol dependency. Decision-making is one of her areas of interest in neuroscience.

One of her roles on the Royal college executive committee is to be the link person to the Faculty of occupational Medicine. She has collaborated with the Faculty on guidelines for managing substance misuse in the workplace and has been a member of a separate working group advising occupational physicians on alcohol misuse at work. She is advisor to London Underground on alcohol and drugs misuse and works closely with their Alcohol and Drug assessment unit in London, carrying out assessments on their staff.

In her charity work she is a Trustee of Sporting Chance Clinic, a high profile addiction charity which helps top sportsmen and women in the UK in their fight against drugs, alcohol and gambling.

Technological Trends in Gambling: Is Behavioural Tracking the Way Forward?

**Dr. Mark Griffiths, Professor of Gambling Studies
International Gaming Research Unit, Nottingham Trent University, UK**

Technology has changed the nature of gambling practices over the last decade and is continuing to do so. This paper briefly overviews what I believe are the ten most notable changes and trends that the gambling studies field is witnessing as a consequence of the impact of technology. The talk briefly examines and review the psychological implications concerning the: (i) feminization of remote gambling, (ii) increase in numbers of digital natives, (iii) increase of empirical research into remote gambling (particularly internet gambling, (iv) increase in mobile gaming, (v) increase in technological advertising and marketing of gambling, (vi) increase in gambling via social networking sites, (vii) increase in gambling convergence and cross-fertilization of technologies, (viii) emergence of new type(s) of problem gambling, (ix) increase in online help and therapy for problem gamblers, and (x) increase in use of behavioural tracking data. The talk will concentrate on the use of behavioural tracking technologies and evaluate the positives and negatives and the implications for problem gambling screening tools and the development of tools for player protection.

**Professor Mark Griffiths
BSc, PhD, CPsychol, PGDipHE, FBPsS, FRSA**

Dr. Mark Griffiths is a Chartered Psychologist and Professor of Gambling Studies at the Nottingham Trent University, and Director of the *International Gaming Research Unit*. He is internationally known for his work into gambling

and gaming addictions and has won many awards including the American 1994 *John Rosecrance Research Prize* for “outstanding scholarly contributions to the field of gambling research”, the 1998 European *CELEJ Prize* for best paper on gambling, the 2003 Canadian *International Excellence Award* for “outstanding contributions to the prevention of problem gambling and the practice of responsible gambling” and a North American 2006 *Lifetime Achievement Award For Contributions To The Field Of Youth Gambling* “in recognition of his dedication, leadership, and pioneering contributions to the field of youth gambling”. His most recent award is the 2009 Research Award from the US National Council on Problem Gambling. He has published over 300 research papers, three books, over 65 book chapters, and over 1000 other articles. In 2004 he was awarded the *Joseph Lister Prize for Social Sciences* by the *British Association for the Advancement of Science* for being one of the UK’s “outstanding scientific communicators”. His most recent awards are the 2006 *Excellence in the Teaching of Psychology Award* by the *British Psychological Society* and the *British Psychological Society Fellowship Award* for “exceptional contributions to psychology”.

Talks – Abstracts

Impulsivity and cognitive distortions in pathological gamblers attending the UK National Problem Gambling Clinic

Luke Clark, Rosanna Michalczuk (Cambridge), Henrietta Bowden-Jones (Imperial)
Behavioural and Clinical Neuroscience Institute, Department of Experimental Psychology, University of Cambridge, UK

Gambling is a widespread form of entertainment that becomes harmful, and potentially addictive, in some individuals. I will present data from the National Problem Gambling Clinic in London, the first (and only) NHS treatment service for problem gambling in the UK, launched in 2008. We are using a combination of self-report questionnaires, co-morbidity profiling, and neurocognitive assessment to measure facets of impulsivity, and to explore their relationship with the distortions of skill, probability and randomness that characterise the immediate cognition of problem gamblers. In a comparison of 30 pathological gamblers (PG) and 30 controls, the PG group displayed elevated impulsivity (UPPS-P) on several facets, with particularly strong effect sizes on Urgency, the tendency to be impulsive in positive or negative mood states (positive urgency, Cohen's $d=1.427$, negative urgency $d=1.784$). Impulsive choice was observed on a state measure of delay discounting, and the preference for immediate rewards over larger delayed rewards on that measure was highly predictive of the level of gambling distortions (on the Gambling Related Cognitions Scale). I will also present preliminary data using the ^{11}C -raclopride ligand with positron emission tomography, to measure dopamine neurotransmission in pathological gamblers. In conclusion, problem gambling is associated with increases in multiple aspects of impulsivity, with the most robust effects in mood-related impulsivity (urgency) and delay discounting, and delay discounting in particular is associated with the distorted cognition that is characteristic of the problem gambler.

The role of overconfidence on problem gambling

Campitelli, Guillermo & Speelman, Craig
School of Psychology and Social Science, Edith Cowan University,
Australia

One of the several variables that were proposed to account for problem gambling is overconfidence. In the context of gambling overconfidence is the belief

that one can increase the probability of winning, and the belief that the probability of a win, having been increased, is greater than it really is (Goodie, 2005). Some studies have found that problem gamblers are more overconfident than non-problem gamblers (Goodie, 2005; Camchong et al., 2007). In this presentation we propose that overconfidence in gambling is acquired by extended experience in a field. This proposal builds upon Shanteau’s (1992) account of overconfidence in experts, that emphasises task characteristics. An experiment will be presented in which the participants show the hard-easy effect (i.e., overconfidence assessing low probabilities and underconfidence assessing high probabilities; Lichtenstein & Fischhoff, 1977) in a domain in which they have some degree of expertise (i.e., geography). However, overconfidence for low probabilities disappeared in a domain in which participants are aware that their expertise is close to zero (i.e., chess). We will discuss the role of overconfidence in problem gambling, and whether interventions aiming at reducing overconfidence would be successful.

An exploration of machine features and player behaviour during individual gaming sessions

Jim Fearnley¹ & Michelle Gray², Margaret Blake, Heather Wardle & Meera Balarajan

¹Responsible Gambling Fund, London

²National Centre for Social Research, London

The Responsible Gambling Fund (RGF) has commissioned NatCen to research the links between the structural features of gaming machines and consumer behaviour. This work represents one of three inter-related research projects commissioned by RGF, designed to gain a better understanding of the interplay between terrestrial machines distribution, structural features, and gambler behaviour, in the interests of identifying factors that might minimise gambling-related harm.

As far as possible RGF-RGSB will provide an updated overview of work it has commissioned on machines research to date, and a summary of RGF-RGSB’s work in general terms. The specific study to which NatCen’s presentation refers has been designed to explore what goes on within gaming sessions, considering the individual and the environment in which gambling takes place. The research has two main phases:

1. Scoping, during which relevant research will be brought together, and the views of subject experts and industry representatives sought.
2. Empirical data collection.

NatCen’s presentation will focus on the empirical data collection which includes two elements:

- The use of overt observation within a range of gambling venues to gain an understanding of what goes on during gaming sessions in terms of choice of and use of machines including structural features, spending, interaction with others etc.
- Video-recording of participants while they play machines in a controlled setting. The participant and interviewer will review the video footage together to explore the how the player interacted with the particular structural features of the machines.

We face a number of challenges, such as the development of a strong relationship with industry stakeholders, and ethical issues regarding player consent, payment to support observed gambling, and incentives for participation. These will be discussed during the presentation.

Hot hand fallacy or gambler’s fallacy, or both

Juemin Xu
University College London

The hot hand fallacy says people expect good or back luck to continue. The gambler’s fallacy says people expect good or back luck to turn. If you believe the former, you should bet more after a streak of winning, and bet less after a streak of losing. If you believe the latter, you should do the opposite. My research shows that gamblers increase the bet after either winning or losing, and the bet increases more when they lose. This may imply that people may selectively apply either fallacy to justify their behaviours. This tendency persists in various games including horse racing, football, poker, roulette, fruit machine, etc. The research is based on the complete gambling history of 1,025 online gamblers in one gambling house from 1 Jan 2010 to 31 Dec 2010.

Tool for responsible games

Anssi Airas
RAY - Finnish Slot Machine Association

For over the last four years, two Finnish game operators Raha-automaattiyhdistys (RAY) and Veikkaus Oy have been using a special tool for evaluating games in the Finnish gaming market. The tool creates a profile of those features in a game that can be considered problematic for the potentially vulnerable players.

The Tool for Responsible Games is based on a typology of the risk factors of gambling, from the perspective of the players, created in 2003-4 by two Finnish professors Jukka Heikkilä and Juha Laine.

The tool is implemented already into early stage of the game development process, where the specifications are still easily adjustable. It helps to draw the attention to the crucial features and gives an overview of the game's qualities.

The tool makes it possible to compare essential features of different games. It consists of 50 indicators that are divided under 9 main sectors. The indicators are given a value, mostly equally balanced, but in certain cases more weight is put on indicators, that are considered more significant.

As the end result, a profile of the game under analysis is created, based on the values of the 9 main sectors. Comparisons between games can be made although the significance and role of some features might be debatable. From this point of view, the tool leaves some room for some reasonable interpretation that might be needed in some special cases. Vice versa, it is a tool for professionals, so it also requires great proficiency and knowledge from those who carry the results into practice, both from the operators and authorities.

Cognitive models for problem gambling

Marvin Schiller & Fernand Gobet
Brunel University

Recent research on problem gambling highlights the role of various factors that are believed to play a role in the development of problem gambling. This includes individual factors and predispositions (e.g. impulsivity), beliefs and biases of players, as well as the role of (misleading) cues from the environment. A precise theoretical model of the underlying mechanisms, however, remains a challenge. Here we address this challenge via computational cognitive models based on the cognitive architecture CHREST. Cognitive Modelling is a powerful tool for the development and exploration of theories of human cognition and behaviour. We aim to study and simulate (pathological) gambling activity in the context of established theories on human information processing and learning. For this purpose the CHREST architecture, which was developed as a computational model for human perception, learning, memory, and problem solving was extended with a model for associative affective learning. We present work on modeling the Iowa Gambling Task, one of the most well-studied paradigms for investigating gambling in the context of decision-making and emotions. The modelling of fruit machine playing is illustrated via a model for the near win effect. Finally, we discuss the prospects of further cognitive modelling work for investigating problem gambling.

Do you want to bet? The prevalence of problem gambling amongst athletes in the United Kingdom

Daniel Rhind
Brunel University London

Objective – Recent high profile cases have emphasized key issues related to gambling in sport. Two specific concerns have been identified. The first relates to athletes becoming addicted to gambling. The second refers to fraudulent practices whereby athletes are involved in betting on events in which they are participating. The present research represents the first study of gambling amongst athletes in the United Kingdom.

Method – A sample of 1050 athletes from a range of sports and competitive levels has been collected. Participants completed a questionnaire comprised of the Problem Gambling Severity Index as well as items related to demographic information and fraudulent practices.

Results – High levels of problem gambling were identified relative to the general UK population. Males from team sports with higher amounts of disposable income were highlighted as being at particular risk.

Conclusions – The importance of addressing this issue in sport is considered along with possible directions for future theory, research and practice.

Promoting successful treatment for problem gamblers

Adrian Scarfe
GamCare London

Gambling is a complex and multidimensional activity that cuts across gender, race, class and cultural divisions in society. Recognising this complexity and the fact that the British Gambling Prevalence Survey 2010 reported a rise in problem gambling has important implications and challenges for the future delivery and direction of treatment in the UK.

This paper will take a broad approach to promoting successful problem gambling treatment by framing it in its public as well as clinical context. Drawing upon clinical material from the counselling work at GamCare, this paper will argue that a narrow focus or emphasis upon a single intervention approach is

likely to be of limited value to many gamblers whose problems may have different contexts and conditions. Rather successful treatment is best served by a multifaceted perspective that can take in to account and integrate the many factors that may come together to cause someone to develop a gambling problem.

Executive CV

Adrian Scarfe is the Head of Clinical Training at GamCare. He was responsible for pioneering the first national problem gambling helpline and national treatment services for problem gamblers and their families in the UK. An experienced and innovative clinician, trainer, consultant and communicator he has developed an integrative approach, with a psychodynamic orientation, to working with problem gamblers addressing key issues such as how to effectively engage problem gamblers in the therapeutic process and the interplay between conscious and unconscious processes in gambling behaviour. This approach has been presented to clinicians, researchers and policy makers in national and international conferences, think tanks and training workshops. He has also advised governments and international NGOs on clinical best practice and benchmarking for effective service provision in the field of problem gambling.

Reduction of social isolation in people “at risk” of problem gambling within the rural Australian central Victorian community of Maryborough, with a particular focus on women 55 years and over using an Integrated Health Promotion model

David Burns

Central Victorian Health Alliance - Primary Care Partnership

Aims & Rationale/Objectives: Reduction of social isolation in people “at risk” of problem gambling within the rural Australian central Victorian community of Maryborough, with a particular focus on women 55 years and over using an Integrated Health Promotion model based on a participatory action research model of enquiry.

Methods: A project officer working with a local service provider representative reference group, worked with the target group using in-depth interviews to collect and aggregate commonalities contributing to social isolation.

Principle findings:

- Facilitated and focused group activities created solutions, by the cohort, that generated sustainable alternative options for their broader social inclusion.

- Identification that perceived barriers existed to joining clubs and community groups. However, with partnership work clubs and community groups are open to new ways of enhancing their membership and reducing perceptions that there are barriers to potential new members/participants.
- Cohort reported that gambling helped ease social isolation
- Cohort developed alternatives to address social isolation and reduce self reported gambling activity.

Discussion: There were a number of preconceptions about the profile of women using electronic gaming machines in this community. This was dismissed as a consequence of information offered by the cohort; as a result this altered the approach to exploring solutions for alternative activities that met, at least in part, the cohort's individual social inclusiveness needs. The alternative approaches to discover and develop social inclusiveness activities and rediscovery of strengths in the women found that this can reduce gambling activity.

Implications: The guided and facilitated discovery of options for social inclusion in this cohort may provide a starting point for other communities to discover and rediscover alternatives to gambling as means of social connectedness for their community.

Responsible gambling – A perspective from a pathological gambler

Anthony (Tony) Franklin

The gambling industry is a multi billion dollar industry and has huge budgets to spend on advertising and lobbying its agenda. It is my view that the government needs to further legislate in the gambling industry to restrict access for problem gamblers to gambling services. In addition law and policy needs to be rigorously enforced via the regulator with very significant fines for breaches of the law in cases of problem gambling or under-age gambling.

Credit and gambling is an explosive combination that can lead to severe debt problems for a pathological gambler. Absent legislation the banks seem unlikely to stipulate how customers spend their money and adopt a best practice to restrict credit from use in gambling transactions. Instead most banks in the UK have altered their charges to reflect gambling transactions as cash advances attracting higher rates of interest and no interest free period.

Somewhat worryingly in my view gambling is becoming increasingly a part of the fabric of society; through subtle incremental change over the years in exposure to the general population.

With the convergence of technology and globalization also playing an increasing significance in problem gambling it is my view that we now have to increase efforts to stay ahead of the curve, or we run the risk of an explosion in problem gambling over the next years with unforeseen costs to society at large.